Overfishing, pollution put world’s reefs in peril

A global survey shows most coral ecosystems are in serious decline
Reefs add $360 million a year to island economy

By Andrew Bridges
Associated Press

LOS ANGELES >> Scientists warn the first global survey of the health of the world's coral reefs shows they are in serious decline, with overfishing worsening a crisis.

Scientists and volunteers found that overfishing has affected 95 percent of more than 1,000 coral reefs monitored since 1997. At least four species of reef fish, hunted as food or to adorn aquariums, face extinction, further threatening the biodiversity of the marine ecosystems.

The results of the five-year study are presented in a report being released today by the Institute of the Environment's Reef Check program at the University of California-Los Angeles. More than 5,000 scientists and volunteers in about 60 countries contributed to the survey, possibly the largest ecological study ever undertaken.

"What we have seen is, coral reefs have been damaged more in the last 20 years than they have in the last 1,000. Suddenly, the pressures of overfishing and damaging types of fishing -- dynamiting fish and poisoning fish, particularly in Southeast Asia -- have taken off," said Gregor Hodgson, a UCLA marine ecologist and founder of Reef Check.

When populations of overfished species, including fish and sea urchins, plummet, the algae they normally keep in check can grow to smother coral and kill an entire reef, Hodgson said.

Coral reefs where fishing has been banned or restricted show signs of recovery. But virtually all the world's reefs show signs of declining health. The survey turned up just one reef, near Madagascar, of 1,107 surveyed that could be considered pristine, Hodgson said.

Pollution and increased amounts of sediments are also taking their toll. A recent study identified bacteria found in the intestines of humans and other animals as the cause of a disease killing elkhorn corals in the Caribbean Sea.

Scientists organized the first international conference to discuss the global decline in coral reef health in 1993. Since then they have struggled with how to devise a program to monitor the world's reefs. Reefs make up just .09 percent of the area of the world's oceans and are spread around the globe, making them difficult to study without the help of volunteers.

"The volunteer component is fantastic. How else can you reach so much of the coral reefs?" said Jamie Hawkins, deputy director of the National Oceanic and Atmospheric Administration's National Ocean Service. NOAA underwrote a portion of a cost of the report.

The report's authors said the project is as much about science as it is raising the public's awareness of the coral reef situation. One contributor acknowledged the size of the survey precludes its being as scientifically rigorous as would be a smaller study.
"There's always a trade-off between quantity and precision. They got a lot of quantity and not a lot of precision," said Jeremy Jackson, a professor at the Scripps Institution of Oceanography, who wrote the preface to the report.

NOAA intends to issue its own national state-of-the-reefs report next month.

Meanwhile, federal officials have begun crafting a plan establishing waters around the Northwestern Hawaiian Islands as a National Marine Sanctuary.

The Northwestern Hawaiian Islands, 10 mostly uninhabited islets and atolls extending 1,200 miles northwest of the main Hawaiian Islands, are where more than 70 percent of the nation's coral reefs are found.

A December 2000 executive order by President Clinton set aside 84 million acres of ocean around the archipelago as the Northwestern Hawaiian Island Coral Reef Ecosystem Reserve, the largest protected area ever established in the United States.

Advocates say a National Marine Sanctuary designation, subject to federal approval, would provide better management for the area.

Coral reefs add $360 million a year to island economy

A study to determine the overall value of the state's 410,000 acres of coral reefs found they generate net revenues of $360 million a year for Hawaii.

The total value of the state's reefs was estimated at $10 billion.

The study, conducted by international reef expert Herman Cesar for the Hawaii Coral Reef Initiative Research Program, was a joint effort between the University of Hawaii and the state Department of Land & Natural Resources.

Estimates were based on a variety of statistics, including $540 million spent annually by residents and visitors on things like dive and snorkel trips; the value of reef-associated fisheries, estimated at $2.5 million a year; and about $10 million spent in related scientific
research.

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Hawaii Coral Reef Initiative Research Program
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